

Bowie, MD

Background

Bowie is a city of approximately 55,000 in eastern Prince George's County, Maryland, located about 20 miles east of downtown Washington, D.C. At the time of this study, it was evident that the City of Bowie had a highly effective stormwater management program. However, stormwater responsibilities were divided among three independent departments, separately responsible for planning, maintenance, and permit compliance.

In May 2012, the Environmental Finance Center (EFC) at the University of Maryland was contacted by the City of Bowie for assistance with understanding the costs associated with stormwater management and the resources necessary to sustain the current level of stormwater service into the future. Through the support of the Chesapeake and Coastal Service of Maryland's Department of Natural Resources (DNR), the EFC was able to conduct a stormwater financing feasibility study in 2013.

The existing funding mechanism for stormwater management in Bowie was to draw funds on an as-needed basis from the general fund. Reliance on the general fund, however, can leave gaps in local stormwater programs, particularly when funds are limited and stormwater must compete with other critical City services for funds. Therefore, the goal of the stormwater financing feasibility study was to recommend a long-term dedicated funding stream that was equitable and effective in generating sufficient revenue for the City to maintain a comprehensive stormwater program. Such a financing mechanism is necessary to address the often costly minimum control measures required of the City in order to meet its NPDES MS4 permit.

Approach

The year-long study incorporated information from various sources including City staff, officials, stakeholder and community groups, and the City of Bowie Environmental Advisory Committee (EAC). Information was collected on the City's stormwater management needs and current stormwater activities, other taxes and fees charged to City businesses and residents, budget allocations, and the monetary costs of improving the stormwater program. Throughout the project period, the Project Team also engaged citizens through a series of public meetings, presentations to key stakeholders, and by having a presence at local community events. Promotional materials such as flyers and a fact sheet were developed and distributed at these events.

HIGHLIGHTS

Location: Maryland

Jurisdiction Type: City

Population: 54,727 (2010)

MS4 Permit: Phase II

Project Period: 2012-2013

Funder: Maryland DNR



An obstructed outfall in Bowie.



A “Green Expo” outreach event in Bowie

As part of the study, the Project Team evaluated a series of funding options to assess what would best fit Bowie’s needs for a fair, equitable, dedicated, and sustainable revenue source to support a comprehensive stormwater management program. Based on the unique characteristics of the City, the Project Team narrowed the field of potential financing mechanisms to three options: collecting a stormwater fee as a line item charge on property bills, outsourcing stormwater management to Prince George’s County, and establishing a stormwater utility.

The Project Team performed a detailed financial analysis and developed an estimated planning-level budget for future stormwater costs. Based on the best available data, the Project Team estimated that the City of Bowie will need to spend approximately \$1.8 million per year over the next 11 years on improvements to their stormwater system. The estimates were developed with Excel-based decision models enabling City staff to adaptively manage their program and make adjustments to estimates as project costs were refined and the impact of an asset management approach could be assessed.

Key Findings and Recommendations

The Project Team recommended distributing the costs associated with paying for stormwater repairs and improvements in proportion to the types of land uses that were contributing to stormwater runoff. Just as a building owner or tenant is responsible for paying for their share to process the wastewater and potable water it uses, or to provide the electricity it consumes, the Project Team recommended that building owners and tenants recognize and be accountable for their contribution to stormwater and the overall costs of managing it.

The Project Team evaluated three funding mechanisms to assess their ability to generate the needed funds to maintain Bowie’s stormwater system. Collecting a stormwater fee as a line item and charge on a property tax bill would have the advantage of reducing the changes needed to the City’s billing structure, but there is often significant difference between the rate of property value assessment and the actual stormwater impact that a property has. This would render a tax line item inequitable. Outsourcing stormwater management to Prince George’s County could result in economies of scale and reduce administrative costs, but the City would lose its control of stormwater revenue and program management. Finally, establishment of a stormwater utility would result in a stable, adequate, flexible and equitable revenue stream, but it would result in increased administrative burden and could face implementation challenges. Based on the analysis of various funding streams, the Project Team recommended that the City of Bowie adopt a stormwater utility to develop a dedicated source of revenue to ensure implementation of the recommended improvements.

The Project Team came up with a rate structure that attempts to balance administrative resource requirements with a fee system that attempts to be both fair and equitable. It included a tiered system based on zoning designations for residential properties and on impervious surface cover for

nonresidential properties. Additionally, the structure would enable the use of credits and other incentives designed to encourage better management of stormwater on private property. The Project Team found that by implementing a tiered fee for residential properties and an impervious surface cover fee for nonresidential properties, a stormwater utility in the City of Bowie would be estimated to generate the \$1.8 million needed annually to implement the practices that would enhance and maintain the City's stormwater system.



A stormwater outfall at Race Track Road in Bowie

For more information, please visit the [MOST Knowledge Center](#).



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